

INTERPROCEDURAL ANALYSIS AND OPTIMIZATION OF AN OBJECT
ORIENTED PROGRAM IN THE PRESENCE OF DYNAMIC CLASS LOADING

Abstract

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A method is provided for analyzing an object oriented program that supports dynamic class loading. A set A of classes in the program is identified, wherein each class within set A is capable of, during execution of the program, causing the loading of a class outside of set A. A first set of method calls belonging to the classes in set A are identified that, during execution of the program, are capable of calling only methods belonging to a class within set A. A second set of method calls belonging to the classes in set A are identified that, during execution of the program, are capable of calling methods belonging to a class outside set A. Data that identifies the first and the second set of method calls is stored for subsequent use (e.g., to optimize the program). According to another embodiment of the invention, a method is provided for optimizing an object oriented program that supports dynamic class loading. A set A of classes in the program is identified, wherein each class within set A is capable of, during execution of the program, causing the loading of a

